

What Is Claimed:

1. A personal multimedia device comprising:
a media processing component configured to:
detect a frame rate of a received video signal;
compare the frame rate to a frame rate native to the personal
5 multimedia device;
increase a frame rate of the received video signal when the frame rate
of the received video signal is less than the frame rate native to the personal
multimedia device by adding frames to the received video signal where the added
frames are based on at least one of the received frames, and
10 decrease the frame rate of the received video signal when the frame
rate of the received video signal is greater than the frame rate native to the personal
multimedia device by removing frames from the received video signal.
2. The personal multimedia device of claim 1, wherein the media
processing component further includes at least one graphics processor configured to
scale a frame resolution of frames in the received video signal to correspond to a
native video format of the personal multimedia device.
3. The personal multimedia device of claim 1, wherein each of the added
frames are derived from an odd field of a first frame of the received video signal and
an even field of a second frame of the received video signal.
4. The personal multimedia device of claim 1, wherein when the received
video signal is a Phase Alternation Line (PAL) formatted video signal and the native

video format is a National Television Systems Committee (NTSC) formatted video signal, the media processing component adds one frame for every five received
5 frames.

5. The personal multimedia device of claim 1, wherein when the received video signal is a National Television Systems Committee (NTSC) formatted video signal and the native video format is a Phase Alternation Line (PAL) formatted video signal, the media processing component removes one frame for every six received
5 frames.

6. The personal multimedia device of claim 1, wherein when the received video signal is a FILM formatted video signal and the native video format is a National Television Systems Committee (NTSC) formatted video signal, the media processing component adds one frame for every four received frames.

7. The personal multimedia device of claim 1, wherein the media processing component further includes:
a video decoder/encoder configured to process the scaled video signal to an analog format appropriate for display on a television using the native video format of
5 the personal multimedia device.

8. The personal multimedia device of claim 1, further comprising:
a channel decoder configured to decode television signals; and
an input/output interface including logic configured to connect external devices to the personal multimedia device.

9. The personal multimedia device of claim 1, wherein the media processing component determines the frame rate of the received video signal by examining header fields in a compressed version of the received video signal.

10. The personal multimedia device of claim 9, wherein the compressed version of the received video signal is compressed based on one of MPEG-2, MPEG-4, H.261, H.263, or H.264 standards.

11. A personal multimedia device comprising:

a media processing component configured to:

detect a frame rate of a received video signal;

compare the frame rate to a frame rate native to the personal

5 multimedia device; and

modify a frame rate of the received video signal when the frame rate of the received video signal is different than the frame rate native to the personal multimedia device by temporally filtering the sequences of frames in the received video signal to derive a new set of interpolated frames at the frame rate native to the personal multimedia device,

10 wherein the media processing component further includes at least one graphics processor configured to scale a frame resolution of frames in the received video signal to correspond to a native video format of the personal multimedia device.

12. The personal multimedia device of claim 11, wherein the media processing component further includes:

a video decoder/encoder configured to process the scaled video signal to an analog format appropriate for display on a television using the native video format of the personal multimedia device.

13. The personal multimedia device of claim 11, further comprising:
a channel decoder configured to decode television signals; and
an input/output interface including logic configured to connect external devices to the personal multimedia device.

14. A method for converting a compressed video signal in a first format to a second format, the method comprising:

determining a frame rate of the video signal in the first format based on header information included in the compressed video signal;

decoding the compressed video signal to uncompress the video signal;

increasing the frame rate of the video signal in the first format when the determined frame rate is less than a frame rate of the second format by adding frames to the uncompressed video signal of the first format, where each added frame is based on at least one frame in the uncompressed video signal in the first format;

decreasing the frame rate of the video signal in the first format when the determined frame rate is greater than the frame rate of the second format by removing frames from the uncompressed video signal in the first format; and

scaling a frame resolution of each of the frames of the video signal in the first format to adjust a resolution of the video signal in the first format to match a
15 resolution of the video signal in the second format.

15. The method of claim 14, wherein each of the added frames are derived from an odd field of a first frame of the video signal in the first format and an even field of a second frame of the video signal in the second format.

16. The method of claim 14, wherein when the video signal in the first format is a Phase Alternation Line (PAL) formatted video signal and the video signal in the second format is a National Television Systems Committee (NTSC) formatted video signal, increasing the frame rate includes adding one frame for every five
5 received frames.

17. The method of claim 14, wherein when the video signal in the first format is a National Television Systems Committee (NTSC) formatted video signal and the video signal in the second format is a Phase Alternation Line (PAL) formatted video signal decreasing the frame rate includes removing one frame for every six
5 received frames.

18. The method of claim 14, wherein when the video signal in the first format is a FILM formatted video signal and the video signal in the second format is a National Television Systems Committee (NTSC) formatted video signal increasing the frame rate includes adding one additional frame for every four received frames.

19. The method of claim 14, wherein determining a frame rate comprises:
determining the frame rate of the video signal in the first format by examining
header fields in the compressed video signal in the first format.

20. The method of claim 19, wherein the compressed video signal in the
first format is compressed based on one of MPEG-2, MPEG-4, H.261, H.263, and
H.264 standards.

21. A video conference system comprising:
a first personal multimedia device configured to output video signals in a first
format and to convert received video signals that are not in the first format to
television compatible video signals in the first format;
5 a first video capture device coupled to the first personal multimedia device and
configured to transmit video signals to the first personal multimedia device;
a second personal multimedia device coupled to the first personal multimedia
device via a network, the second personal multimedia device configured to output
video signals in a second format and to convert received video signals that are not in
10 the second format to television compatible video signals in the second format; and
a second video capture device coupled to the second personal multimedia
device and configured to transmit video signals to the second personal multimedia
device.

22. The video conference system of claim 21, further comprising:
a third personal multimedia device coupled to the first personal multimedia
device and the second personal multimedia device via the network, the third personal

multimedia device configured to convert the received video signal to a third format
5 when the native format is different from the first and second formats.

23. The system of claim 21, wherein the first and second personal
multimedia devices are set-top boxes.

24. The video conference system of claim 21, wherein the first personal
multimedia device includes:

a media processing component configured to:

increase a frame rate of a received video signal when the frame rate of
5 the received video signal is less than a frame rate of a native video format of the first
personal multimedia device by adding frames to the received video signal where the
added frames are based on at least one of the received frames, and

decrease the frame rate of the received video signal when the frame
rate of the received video signal is greater than a native frame rate of the first personal
10 multimedia device by removing frames from the received video signal, wherein

the media processing component further includes at least one graphics
processor configured to scale a frame resolution of the frames in the received video
signal to correspond to the native video format of the first personal multimedia
device.

25. The video conference system of claim 21, wherein each of the added
frames are derived from an odd field of a first frame of the received video signal and
an even field of a second frame of the received video signal.

26. The video conference system of claim 21, wherein when the received video signal is a Phase Alternation Line (PAL) formatted video signal and the native video format is a National Television Systems Committee (NTSC) formatted video signal, the media processing component adds one frame for every five received
5 frames.

27. The video conference system of claim 21, wherein when the received video signal is a National Television Systems Committee (NTSC) formatted video signal and the native video format is a Phase Alternation Line (PAL) formatted video signal, the media processing component removes one frame for every six received
5 frames.

28. The video conference system of claim 21, wherein when the received video signal is a FILM formatted video signal and the native video format is a National Television Systems Committee (NTSC) formatted video signal, the media processing component adds one additional frame for every four received frames.

29. A device for converting a video signal in a first format to a second format, the device comprising:
means for determining a frame rate of the video signal in the first format;
means for increasing the frame rate when the determined frame rate is less
5 than a frame rate of the second format by adding frames to the video signal of the first format, where each added frame is based on at least one frame in the video signal in the first format;

means for decreasing the frame rate when the determined frame rate is greater than the frame rate of the second format by removing frames from the video signal in

10 the first format; and

means for scaling a frame resolution of each of the frames of the video signal in the first format to adjust a resolution of the video signal in the first format to match a resolution of the video signal in the second format.

30. The device of claim 29, wherein the device is a set-top box.